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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
HOM, SHICK C	

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/734,598	TOSHIMITSU ET AL.	
	Examiner	Art Unit	
	Shick C. Hom	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,4-17,19 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4-7,12-17 and 20* is/are allowed.

6)☒ Claim(s) *2,8-11 and 19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11/19/04 have been fully considered but they are not persuasive.

In page 15 lines 9-17, applicant argued that Molnar does not disclose the base station controller being configured to "assign a fixed channel to a group of mobile stations in order to carry out a radio communication with each mobile station of the group" and the "group of mobile stations running at same speed or on same lane of the road" as now amended in claims 2 and 8, respectively, is not persuasive because Molnar et al. in col. 7 line 61 to col. 8 line 13 which recite the RACH channel being shared by the separate mobile terminals in the cell for communication with the base station clearly reads on the fixed channel assigned to the group of mobile stations in the cell of the base station in order to carry out communication with the group as in claim 2. Further, Molnar et al. in col. 8 lines 38-53 which recite the beams being interrogated and processed on the basis of the speed at which the mobile terminals are traveling through the cell clearly reads on group of mobile stations running at same speed as in claim 8.

In page 16 lines 3-8, applicant argued that Molnar does not disclose the radio mobile station "transmits a signal to the base station controller configured to follow the radio mobile station even if there is not information to be transmitted to the base station controller" is not persuasive because Molnar et al. in col. 9 lines 6-17 which recite the base station receiver 535 being used to track the location of the mobile terminals as they move within the cell clearly anticipate the base station following the radio mobile station even if there is not information to be transmitted using a signal transmitted by the mobile station, i.e. received signal at the base station receiver as in claim 10.

In page 16 lines 11-17, applicant argued that Molnar does not disclose the base station controllers "configured to predict a positional range of a hand-over between the radio base station controller" and the method of "predicting a positional range of a hand-over between the first and second radio base station controllers in advance" as in claims 11 and 19, respectively, is not persuasive because Molnar et al. in col. 13 line 66 to col. 14 line 36 which recite the step of locating the satellites that's within communication range using the searcher beam and then selecting an optimal set of beams for communication, whereby the searcher beams is used to assist in hand-over as

terminals moves from one coverage area to another clearly reads on predicting a positional range of a hand-over as in claims 11 and 19.

Claim Objections

2. Claims 9-10 are objected to because of the following informalities: in claim 9 line 2 delete typo "a an" and insert ---an---. In claim 10 lines 5-6 delete typo "to to" and insert ---to---. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 2, 8-11, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Molnar et al. (6,694,154).

Regarding claim 2:

Molnar et al. disclose a radio communication system comprising: (a) a plurality of mobile stations (see col. 3 lines 45-56 which recite radio communication including mobile terminals); (b) a plurality of base stations configured to generate a plurality of beam patterns in order to carry out a radio communication with each of the plurality of mobile stations (see col. 8 line 54 to col. 9 line 5 which recite a first set of beams associated with the current base station and a second set of beams associated the neighboring base station clearly reads on base stations generating a plurality of beam patterns); and (c) a base station controller configured to assign a fixed channel to a group of mobile stations in order to carry out a radio communication with each mobile station of the group (see col. 7 line 61 to col. 8 line 13 which recite the RACH channel being shared by the separate mobile terminals in the cell for communication with the base station clearly reads on the fixed channel assigned to the group of mobile stations in the cell of the base station in order to carry out communication with the group); wherein the base station controller has a device configured to prevent beam patterns using the fixed channel from interfering with each other when communicating with each mobile station of the group (see col. 5 lines 46-55 which recite the communication between base station and mobile

terminals and col. 9 lines 6-17 which recite the base station using proper selection of decoding beam patterns to minimize degradation of calls, i.e. minimize interference), and each of the plurality of mobile stations is configured to run on a road, and at least a part of the plurality of base stations are arranged along the road (see col. 8 lines 38-53 which recite the mobiles moving along a highway, i.e. the mobile station running on a road).

Regarding claim 8:

Molnar et al. disclose the radio base station controller which is connected to a plurality of base stations arranged along a road, and controls the plurality of base stations, in order to carry out a radio communication with mobile stations running on the road (see col. 3 lines 45-56 which recite radio communication including mobile terminals), the radio station controller comprising: (a) a device configured to detect each speed and each lane of each of the mobile stations; (see col. 8 lines 38-53 which recite Doppler shift being used to measured or determine the speed and col. 8 lines 38-53 which recite beam frequency being selected base upon speed at which the mobile terminals are traveling on the highway); (b) a device configured to assign a channel to a group of the mobile stations running at same speed or on same lane of the road (see col. 7 line 61 to

col. 8 line 13 which recite the RACH channel being shared by the separate mobile terminals in the cell for communication with the base station clearly reads on the channel assigned to the group of mobile stations in the cell of the base station and col. 8 lines 38-53 which recite the beams being interrogated and processed on the basis of the speed at which the mobile terminals are traveling through the cell clearly reads on group of mobile stations running at same speed); and (c) a device Configured to change the channel in accordance with a change of the speed or a change of the lane (see col. 8 lines 38-53 which recite beams allocated to fast-moving highway traffic and other beams allocated to less dynamic environment).

Regarding claim 9:

Molnar et al. disclose the wherein an interval of the radio communication is changed depending on the change of the speed of each of the mobile stations (see col. 8 lines 38-53 which recite beam frequency being selected base upon speed at which the mobile terminals are traveling on the highway and col. 8 lines 38-53 which recite having beams allocated to fast-moving highway traffic and having other beams allocated to less dynamic environment).

Regarding claim 10:

Molnar et al. disclose a radio mobile station which is connected to a plurality of base stations configured to generate a plurality of beam patterns (see col. 8 line 54 to col. 9 line 5 which recite a first set of beams associated with the current base station and a second set of beams associated the neighboring base station clearly reads on base stations generating a plurality of beam patterns), and then carries out a radio communication with a base station controller configured to control an antenna installed in each of the base stations (see col. 12 lines 12-37 which recite the beamform controller at the base station controlling the beamformer and apply weighting to the individual links clearly reads on the base station controller and controlling the antenna) composed of a plurality of antenna devices (see col. 5 line 59 to col. 6 line 7 which recite the devices for controlling the antenna at the base station), wherein the radio mobile station transmits a signal to the base station control configured to follow the radio mobile station, even if there is no information to be transmitted to the base station controller (see col. 9 lines 6-17 which recite the base station receiver 535 being used to track the location of the mobile terminals as they move within the cell clearly anticipate the base station following the radio mobile station even if there is not information to be transmitted using a

signal transmitted by the mobile station, i.e. received signal at the base station receiver).

Regarding claim 11:

Molnar et al. disclose a plurality of radio base station controllers connected to a plurality of base stations and controls the plurality of base stations in order to carry out a radio communication with at least one mobile station running on a road (see col. 3 lines 45-56 which recite radio communication including the base station and mobile terminals and col. 8 lines 38-53 which recite the mobiles moving along a highway, i.e. the mobile station running on a road), wherein the base stations are arranged along the road and the plurality of base station controllers are configured to predict a positional range of a hand-over between the radio base station controllers and information to be transmitted to the mobile station is shared between the radio base station controllers adjacent to each other (see col. 13 line 66 to col. 14 line 36 which recite the step of locating the satellites that's within communication range using the searcher beam and then selecting an optimal set of beams for communication, whereby the searcher beams is used to assist in hand-over as terminals moves from one coverage area to another clearly reads on predicting a positional range of a hand-over and col. 8 line 54 to col. 9 line 5 which recite the

neighboring base station beam used for handoff as the mobile is running on the road clearly reads on positioning the base station controllers as being adjacent).

Regarding claim 19:

Molnar et al. disclose the radio communication method comprising the steps of: (a) detecting a start of a communication between a predetermined first base station connected to a first base station controller and a mobile station running on a road (see col. 7 line 61 to col. 8 line 13 which recite the step of detecting the presence of the new mobile station within the cell and col. 8 lines 38-53 which recite the mobiles moving along a highway, i.e. the mobile station running on a road); (b) requesting a hand-over process to the mobile station (see col. 8 line 54 to col. 9 line 5 which recite the step of mobile station handoff from neighboring base station); (c) transferring to a second base station controller, a signal to be transferred through the predetermined first base station to the mobile station (see col. 8 line 54 to col. 9 line 5 which recite informing the neighboring base station what beam the current base station is using at handoff for communication with the mobile); (d) transmitting the signal to the mobile station through a predetermined second base station connected to the second base station controller (see col. 6 lines 8-24 which

recite the base station transmitting to the mobile terminal using the selected beam); and (e) selecting a better signal in which a reception state is better, from two signals received by the mobile station (see col. 7 lines 52-60 which recite selecting the beams based on strength and quality measurements), and (f) predicting a positional range of a hand-over between the first and second radio base station controllers in advance (see col. 13 line 66 to col. 14 line 36 which recite the step of locating the satellites that's within communication range using the searcher beam and then selecting an optimal set of beams for communication, whereby the searcher beams is used to assist in hand-over as terminals moves from one coverage area to another clearly reads on predicting a positional range of a hand-over).

Allowable Subject Matter

5. Claims 4-7, 12-17, and 20 are allowed.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

7. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick C. Hom whose telephone number is 571-272-3173. The examiner can normally be reached on Monday to Friday with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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